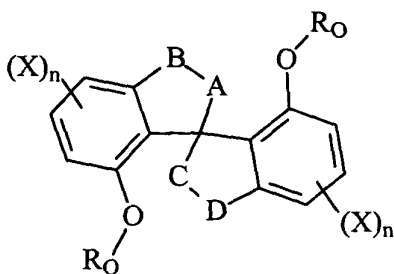


What is claimed is:

1. A chiral compound represented by the following structure:



wherein A, B, C and D are independently selected divalent groups, the X groups are independently selected substituents, the n subscripts are independently 0, 1, 2, or 3, and the R_O groups are independently hydrogen or a substituent capping each oxygen, and wherein any two X and/or R_O groups can optionally form a fused ring and the two R_O groups can optionally connect to form a bridge.

2. The compound of claim 1 wherein A, B, C and D is independently selected from the group consisting of methylene, oxygen, sulfur, sulfoxyl, sulfonyl, carbonyl, mono-substituted nitrogen (N-R), and di-substituted carbon (R₁-C-R₂), wherein R, R₁ and R₂ are independently hydrogen or a substituent and any two R, R₁ and R₂ groups on the same ring in said structure can optionally form a fused ring.

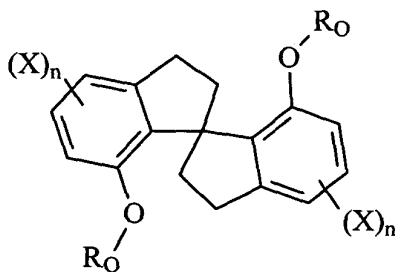
3. The compound of claim 2 wherein A, B, C and D are independently methylene or di-substituted carbon (R₁-C-R₂).

4. The compound of claim 1 wherein A and B are the same, respectively, as C and D.

5. The compound of claim 1 wherein each X substituent is independently selected from the group consisting of oxygen-containing organic substituents and/or a carbon-containing substituents.

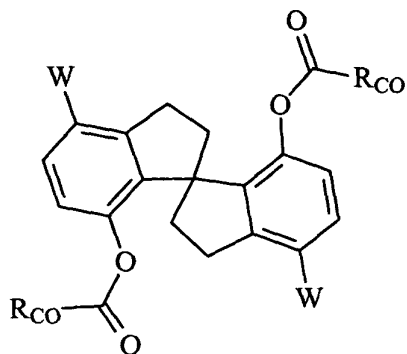
6. The compound of claim 5 wherein each X is independently selected from the group consisting of alkoxy, aryloxy, carboalkyl ($\text{O}-\text{C}(=\text{O})\text{R}$), carboaryl ($\text{O}-\text{C}(=\text{O})\text{Ar}$), carboalkoxy ($\text{O}-\text{C}(=\text{O})\text{OR}$), carboaryloxy ($\text{O}-\text{C}(=\text{O})\text{OAr}$), alkyl groups of about 1-20 carbons, cycloalkyl groups of about 1-20 carbons, aryl groups of about 6-20 carbons, alkaryl groups of about 6-20 carbons, carboalkoxy ($\text{C}-\text{C}(=\text{O})\text{OR}$), carboaryloxy ($\text{C}-\text{C}(=\text{O})\text{OAr}$), aryl or alkyl ketones ($\text{C}-\text{C}(=\text{O})\text{R}$ or $\text{C}-\text{C}(=\text{O})\text{Ar}$), all either substituted or unsubstituted, or any two members of the X and R_O groups on a ring may be joined to form a fused ring.

7. The compound of claim 1 having the following structure



wherein each X is an independently selected substituent; each n is independently 0 to 3; and R_O is as defined above.

8. The compound of claim 1 represented by the following structure:

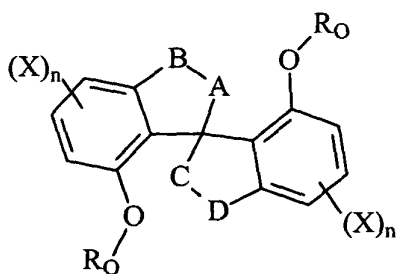


wherein W is a substituent or replaced by hydrogen and each R_{CO} is an independently selected substituent.

9. The compound of claim 8 wherein R_{CO} is aryl, alkyl, cycloalkyl, alkaryl or heterocyclic, all either substituted or unsubstituted.

10. The compound of claim 1 wherein the compound is capable of polymerization.

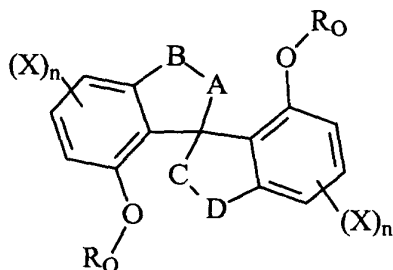
11. A material compositions comprising an enantiomerically excess of one enantiomer of the compound of the following structure



wherein A, B, C and D are independently selected divalent groups, the X groups are independently selected substituents, the n subscripts are independently 0, 1, 2, or 3, and the R_O groups are independently hydrogen or a substituent capping each

oxygen, and wherein any two X and/or R_O groups can optionally form a fused ring and the two R_O groups can optionally connect to form a bridge.

12. A liquid crystalline composition comprising as a chiral dopant admixed with a liquid crystal material, one or more chiral compounds, or a polymerized form thereof, represented by the following structure:



wherein A, B, C and D are independently selected divalent groups, the X groups are independently selected substituents, the n subscripts are independently 0, 1, 2, or 3, and the R_O groups are independently hydrogen or a substituent capping each oxygen, and wherein any two X and/or R_O groups can optionally form a fused ring and the two R_O groups can optionally connect to form a bridge.

13. The liquid crystalline composition of claim 12 further comprising a polymer binder in which domains of the liquid crystal are dispersed.

14. The liquid crystalline composition of claim 12 wherein the liquid crystalline composition is STN, TN, chiral nematic, or ferroelectric.

15. The liquid crystalline composition of claim 12 wherein the liquid crystalline composition is chiral nematic.

16. A coated substrate comprising the liquid crystalline composition of claim 12.

17. A display comprising the liquid crystalline composition of claim 12 wherein the composition is disposed between first and second electrodes.

18. The display of claim 17 wherein the liquid crystalline composition is bistable and dispersed in the form of domains in a polymeric matrix.

19. The use of a chiral compound of the structure of claim 11, or a polymerized form thereof, as a chiral dopant in liquid crystals.

20. The use of chiral compounds of claim 11, or a polymerized form thereof, in admixture with a liquid crystal material, in a display, polarizer, color filter, non-absorptive color filter, liquid crystal pigment for decorative coatings or security markings, optical switching, optical information storage, or diagnostic or medical compositions.